

ABSTRACT

A STUDY ON ROLE OF FAST IN BLUNT ABDOMINAL TRAUMA

INTRODUCTION:

Blunt abdominal trauma consists of those cases where there is injury to one or more viscera with or without any external injury. The most important pre-operative management in these patients is to ascertain the need for laparotomy. The screening test must be highly sensitive and quick. It is also clear advantage to the operating surgeon if the same test is sensitive enough for citing the organ of injury.

FAST (Focused Assessment with Sonography in Trauma) is a rapid portable non-invasive examination, that can be performed by emergency clinicians and trauma surgeons to detect hemoperitoneum. The current FAST protocol with patient in supine position consists of 4 acoustic windows: perihepatic, perisplenic, pelvic and pericardiac. Presence of free fluid in any of the 4 acoustic windows is considered as positive FAST. The present study outlines the role and diagnostic avidity of FAST in Blunt Abdominal Trauma.

MATERIALS AND METHODS:

This prospective observational study has been performed in Tirunelveli Medical College and Hospital over a period of one and half year with a study population of 60 patients. Trauma patients presented in TVMCH casualty with complaints of abdominal pain and injuries were included irrespective of age and sex. While, patients with suspected head injury and penetrating abdominal injury were excluded. FAST was carried out in all 4 acoustic windows and was confirmed by CT-scan. Further management was done accordingly.

RESULTS:

Majority of the patients were in the age group of 13 to 60 years amounting to 93%. Males were mostly affected (80%) when compared to females (20%).

Most of the patients presented with pain abdomen followed by vomiting and abdominal distension. Perihepatic and perisplenic collection was the most common finding in FAST positive cases. The most common intra-operative findings were splenic injury followed by hepatic and bowel injury. Perisplenic collection showed the highest intra-operative correlation with FAST. However, intra-operative correlations were found variable for perihepatic and pelvic collections in FAST.

CONCLUSIONS:

Focussed Assessment with Sonography in Trauma (FAST) has established a promisingly high diagnostic avidity with sensitivity of 96.67% and specificity of 100% in detecting free fluid among patients with blunt abdominal trauma. The sonographic scan findings showed a decent correlation with the intra-operative findings. Diagnosing the organ injured is particularly difficult when multiple window collections were noted in FAST.

Considering the future prospect of this study, with technological advancement, FAST is reaching beyond the institution level to the injured patients in multiple casualty incidents and battlefield situations.

Keywords: Blunt abdominal trauma, FAST (focused assessment with sonography in trauma), perihepatic, perisplenic, pelvic, pericardiac, free fluid.